tangents for each of the silhouette candidates, and the resulting values and tangents are used to detect the object of interest.

In the Office Action, the Examiner rejected Claims 1-5, 9-13 and 18-20 under 35 U.S.C. §103(a) as being unpatentable over the combination of Courtney (United States Patent No. 5,969,755), and Abe (United States Patent No. 5,134,472). The Examiner also rejected Claims 6 and 14 under 35 U.S.C. §103(a) as being unpatentable over Courtney and Abe, in further view of the article entitled "Grouping into Regions, Curves, and Junctions" by Lee et al. and rejected Claims 7, 8, and 15-17 under 35 U.S.C. §103(a) as being unpatentable over Courtney and Abe, in further view of Gibbon (E.P. Patent No. 0 635 983 A2).

Independent Claims 1, 9, and 20

The Examiner rejected independent Claims 1, 9, and 20 under 35 U.S.C. §103(a) as being unpatentable over the combination of Courtney.

5   The Examiner asserts that, referring to claim 1, Courtney discloses a method for detecting an object of interest in an image processing system. The Examiner further asserts that Courtney discloses the step of segmenting the difference image into a plurality of regions (citing col. 6, lines 27-31 and 10   Figure 7f), but fails to teach that the difference image is segmented into a plurality of regions such that each of the regions are bounded by one or more lines passing through the entire image. The Examiner asserts, however, that segmenting images into a plurality of regions such that each of the regions 15   are bounded by one or more lines passing through the entire image was exceedingly well known in the art (for example, by Abe).

Applicants note that the vertical segments cited by the Examiner are vertical segments within a pointing window, not an entire image. Abe teaches that, "in Fig. 11, stripes S, T and U 20   indicate the vertical segments of a pointing window image element." Col. 10, lines 66-68. Abe teaches that the pointing window is not the entire image, but that it "defines an area in

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which CPU 21 attempts to detect the moving object...The pointing window may be a rectangule or other geometric configuration including the target area." Col. 4, lines 19-23.

Thus, Courtney and Abe, alone or in combination, do not disclose or suggest "segmenting the difference image into a plurality of regions, wherein the difference image is segmented into a plurality of regions such that each of the regions are bounded by one or more lines passing through the entire image," as required by each of the independent claims.

Additional Cited References

The Examiner has also cited Lee et al., "Grouping into Regions, Curves, and Junctions" for its disclosure of the determination of saliency values using tensor voting. Lee et al. does not disclose or suggest "segmenting the difference image into a plurality of regions, wherein the difference image is segmented into a plurality of regions such that each of the regions are bounded by one or more lines passing through the entire image," as required by each of the independent claims.

The Examiner has also cited Gibbon (E.P. Patent No. 0 635 983 A2) for its disclosure of the step of detecting a neck position of a moving person by analyzing the sum of x-components of tangents along a corresponding silhouette. Gibbon does not disclose or suggest "segmenting the difference image into a plurality of regions, wherein the difference image is segmented into a plurality of regions such that each of the regions are bounded by one or more lines passing through the entire image," as required by each of the independent claims.

Dependent Claims 2-8 and 10-19

The Examiner rejected dependent Claims 2-5, 10-13 and 18-19 under 35 U.S.C. Section 102(e) as being anticipated by Courtney, rejected Claims 6 and 14 under 35 U.S.C. §103(a) as

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being unpatentable over Courtney and Abe, in further view of the article entitled "Grouping into Regions, Curves, and Junctions" by Lee et al. and rejected Claims 7, 8, and 15-17 under 35 U.S.C. §103(a) as being unpatentable over Courtney and Abe, in further view of Gibbon.

Claims 2-8 and 10-19 are dependent on independent Claims 1 and 9, respectively, and are therefore patentably distinguished over Courtney, Abe, Lee, and Gibbon (alone or in any combination) because of their dependency from amended independent Claims 1 and 9 for the reasons set forth above, as well as other elements these claims add in combination to their base claim.

In view of the foregoing, Applicant respectfully submits that the present application is in condition for allowance.

Early and favorable action is earnestly solicited.

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Respectfully submitted,

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CERTIFICATE OF FACSIMILE TRANSMISSION

15 · It is hereby certified that this correspondence is being transmitted via facsimile to Examiner Chong R. Kim of the U.S. Patent and Trademark Office at **703-872-9314** on the date indicated below.

On __May 21, 2003__

20 By _____

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